

Present:

Chairperson - Councillor Martin
Councillor Gill
Councillor Hayne
Councillor Hunt
Councillor Rasode
Councillor Steele
Councillor Villeneuve
Mayor Watts

Absent:

Councillor Hepner

Staff Present:

City Clerk
City Manager
City Solicitor
General Manager, Engineering
General Manager, Finance & Technology
General Manager, Human Resources
General Manager, Parks, Recreation & Culture
General Manager, Planning & Development

A. DELEGATIONS

1. **Linda Delli Santi, Executive Director, BC Greenhouse Grower's Association**
File: 0250-20; 0550-20-10

In attendance before Council to provide a brief presentation on the Minister of Agriculture's Bylaw Standard for Cogeneration at greenhouses.

The following comments were made:

- BC Greenhouse Grower's Association works closely with the United Flower Growers on energy issues such as cogeneration. Between the two Associations, over 160 greenhouse growers are represented with over 975 acres of production and directly employ over 6,500 workers and a combined farm gate value of \$475 M.
- Cogeneration also known as combined heat and power (CHP) is an engine that produces electricity, thermal energy and CO₂ from a single fuel source.
- At the greenhouse, CO₂ and the heat will be used for crop production and some or all of the electricity with the excess electricity being sold to BC Hydro under the Standing Offer Program.
- A short video of a greenhouse employing cogeneration was viewed by Council.
- The components of a conventional heating system in a greenhouse do not produce electricity.
- A cogeneration system includes components to produce CO₂ and electricity. By using fuel gas, or purchased liquid CO₂, heat and electricity would be produced and utilized with the excess being sold to BC Hydro.
- The Minister's Bylaw Standard addresses one of the regulatory hurdles in adopting this innovative technology.
- The Minister's Bylaw Standard was established after consultation with the agricultural industry, local governments, cogeneration industry and the public.
- The Bylaw Standard is criteria developed for natural gas fired cogeneration with a permitted use in the Agricultural Land Reserve (ALR) and to address

local government concerns to minimize the risk of cogeneration systems being installed for non-farm purposes.

- The Agricultural Land Commission (ALC) was involved in the process and recognizes that the use of cogeneration had not been contemplated when the *Act* was written and as such, the use requires a non-farm use application.
- The adoption of this Bylaw Standard, by the City of Surrey, would eliminate the need to rezone the footprint of the cogeneration unit as a non-farm use on agricultural land.
- The cogeneration facility capacity must not exceed 1.0 MW/ha of land in greenhouse crop production on the farm operation. A cogeneration facility with a capacity of up to 1.5 MW/ha is permitted if high intensity lighting (greater than 10,000 Lux) is used in the greenhouse.
- The cogeneration facility must operate with an overall efficiency of at least 80% to:
 - ensure optimization of running hours to benefit the greenhouse operation;
 - allow for flexibility to optimize the generation of heat, electricity and CO₂ based on crop needs and seasonal weather; and
 - rely upon the BC Hydro Standing Offer Program to ensure the cogeneration facility efficiency is at least 80%.
- The farm must have capacity to store excess heat generated by the cogeneration facility for beneficial use by the greenhouse allowing for flexibility in run times and to act as a buffer for heat usage to minimize wasted heat when the cogeneration facility is operating for electricity or CO₂.
- The cogeneration facility must meet emissions standards outlined by the *BC Environmental Management Act* and should be located and managed to minimize noise impacts on neighbours.
- The greenhouse sector worked with the Ministry of Agriculture in the development of this Bylaw Standard and finds that it lays out achievable criteria while meeting the needs of the growers and the Community.
- The BC Greenhouse Growers Association respectfully requests, the City of Surrey consider adopting the Minister's Bylaw Standards regulating combined heat and power or cogeneration at greenhouses in the ALR.

The following comments were made by Council:

- Why must it be fueled by natural gas, as it has been controversial in other Municipalities dealing with other sources of energy?
The delegation responded that in order to be 80% efficient and qualify for the BC Hydro Standing Offer Program, which is the only way to sell electricity to the grid, the only way to do that is to use the heat and CO₂ from the cogeneration engine. The technology is not available to fire the engines by wood to produce the desired results.
- Methane would be similar to natural gas. Is that allowable in this scenario?
The delegation responded that at this point in time it is not allowable. The

Minister's Bylaw Standards were developed based on the use of natural gas fired cogeneration. Currently, in our sector, there is one running in Delta that takes methane from the landfill and they run the cogeneration but are unable to extract the CO₂ from it.

- Is 100% of the CO₂ captured?
During the day where the CO₂ is required for the plants 100% is captured.
- When the facility is required to generate electricity you don't capture the CO₂?
The delegation responded that since the system is sized for heat demand and the way the Bylaw Standard is written, it is not permitted to run the system to generate electricity only.
- At what times would you not be capturing the CO₂?
The delegation responded that non-daylight hours would not capture the CO₂. Those members who currently want to add the CO₂ component already have a natural gas boiler.

B. ITEMS REFERRED BY COUNCIL

C. CORPORATE REPORTS

D. DELEGATION REQUESTS

E. COUNCILLORS' REPORTS

F. OTHER COMPETENT BUSINESS

G. ADJOURNMENT

It was

Moved by Councillor Hayne
Seconded by Councillor Hunt

That the Council-in-Committee meeting do

now adjourn.

Carried

The Council-in-Committee adjourned at 5:54 p.m.



Jane Sullivan, City Clerk



Councillor Martin, Chairperson